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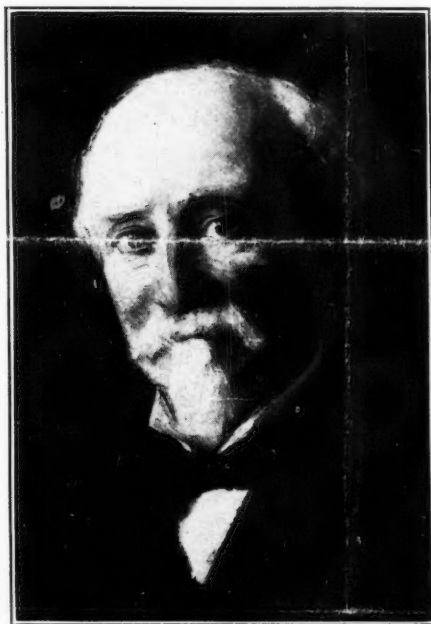
"The Civil Engineer Who Was Called The Father of Aviation"

UNDER the above caption the "Kansas City Star" of July 10th last says:

"At a time when the attention of the whole world is centered upon the gallant young American who made the Trans-Atlantic flight from New York to Paris, some people may recall that back in 1903—December 17, to be exact—there took place at the Kill Devil sand hills, near Kitty Hawk, N. C., what was at that time the most remarkable thing that has been done in aeronautics, as it was then commonly called. It was 'The first instance when a person has been carried from ground in actual flight by mechanical means, without artificial aids.'"

"The Wright brothers, Wilbur and Orville, were the central figures of that spectacular flight, brief as it was, but linked with theirs was also another name to which they have always, most generously, given full credit in the discovery of the principles of flying; the name of Octave Chanute. Years ago they referred to him as 'The Father of Aviation'."

Octave Chanute was born in Paris, France, on February 18, 1832. His father was Professor of History in the Royal College of France, in Paris, until 1838, when he accepted appointment as Vice-President of Jefferson College, in the State of Louisiana. In 1844 he removed to New York and engaged in literary pursuits. The son, Octave, who was six years old when the family came to the United States, completed his education in New York, and became, to use his own expression, thoroughly Americanized.



*The Father of Aviation
Octave Chanute, as depicted by the
oil portrait at Society headquarters*

Several excerpts from the memoir of Octave Chanute as prepared for the Society by Robert W. Hunt, Charles F. Loweth, and Charles L. Strobel, Members, are both interesting and illuminating. "At the age of seventeen," they say, "Mr. Chanute started work on the Hudson River Railroad, beginning as was usual at that day, at the very foot of the ladder."

"He introduced himself to the Resident Engineer and asked for em-

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"Meet You at Columbus"

THE King is dead! Long live the King! The Summer Meeting at Denver was a success—now for the Fall Meeting at Columbus, Ohio.

So much has been said about the Mississippi River Flood by every one, except engineers, that it seems now to be the time for them to speak. This they will do at Columbus. A day and a half will be devoted to papers on the flood, its causes, its characteristics, and the various modes of control that may be applicable to the problem.

Rainfall, run-off characteristics, reforestation, levees, spillways, detention basins, storage reservoirs, auxiliary channels, navigation, reclamation, power—all these will be discussed analytically by men who know of their respective values or applicability to the problem. The development of the topic is bound to prove of great interest to all concerned with this and kindred subjects.

The water supply of Columbus and the unusual method of water softening so successfully being developed; the meetings of the Sanitary Engineering, the Highway and the Structural Divisions; the other features being planned, both technical and social; the relaxed season of the year; and, last but not least, a football game on the home grounds should severally or collectively make a strong appeal. Columbus, only a night's ride from the homes of several thousand of our members, should draw a large meeting.

FALL MEETING
COLUMBUS, OHIO
OCTOBER 12-15



Just at the time these members and guests at the 57th Convention were enjoying Colorado scenery, two miles up in the air, the East and Central West were sweltering in one of the periodic hot spells of the past summer. At Echo Lake Lodge, many were glad to have brought along overcoats

Library Vagaries

By Harrison W. Craver, Director

WHILE most of the letters that come to the Engineering Societies Library refer to strictly professional matters, from time to time the layman appeals for help. His calls, based on a reading of the popular "scientific" magazines, often are remarkable.

"Many years ago," writes a western farmer, "my uncle buried a pot of gold on the farm and died before telling any one where he buried it." Electricity was to be appealed to, of course, to find the treasure, and the Library was asked for information that would enable the inquirer to design a suitable prospecting apparatus.

Another man in a seaport in South America requested a "bibliography on dikes." One searcher was sure that hydraulic dikes were meant, but another searcher was just as certain that geological dikes were wanted. On investigation it was found that the man was a mining engineer, so he was sent a bibliography on geological dikes. This guess was apparently correct as the bill was paid without complaint.

One of the most interesting recent searches was on the "mathematical difference between a crank and an eccentric when driving or being driven." After many hours of searching, a twenty-seven page mathematical explanation of the difference was found, in the Transactions of the American Society of Agricultural Engineers.

Another recent inquiry had to do with an automatic device to prevent locomotives from leaving the track "if the rails spread" or if the "flanges mounted the rail." Unfortunately,

an invention was not proceeding satisfactorily, and help was needed. One wonders what was to happen when this invention met an automatic derailer at an open bridge.

Such inquiries are exceptional, of course. The Library tries to supply information that will enlighten the inquirer and check waste of time and money.

Committees

THE Board of Direction at its Denver Meeting appointed Messrs. Charles R. Gow (Boston), Arthur N. Talbot (Urbana), and Allen Hazen (New York), a sub-committee to outline a feasible program, manner of organization, and suggested personnel of a new committee to carry on a research into the engineering problems and behavior of soils.

Six members of the Special Committee on Irrigation Hydraulics, Chairman D. C. Henny, and Messrs. B. A. Etcheverry, R. A. Monroe, R. L. Parshall, F. C. Scobey, and J. C. Stevens met at Fort Collins, Colo., on the Monday and Tuesday, July 11th and 12th, preceding the Denver Meeting.

On July 1st several members of the Research Committee, including Chairman F. E. Turneaure, and Messrs. G. M. Braune, Milo S. Ketchum, F. E. Schmitt, Arthur N. Talbot, and Thomas H. Wiggin, gathered at New York for an all-day conference on the research work of the Society. Col. Charles R. Gow met with them at their request.

Society "Fellows"

THE Society has eight members who are designated as "Fellows."

"Fellows" are defined in the Constitution as " * * * contributors to the permanent funds of the Society, though they may not be eligible for admission as Corporate Members."

On June 3d, 1868, the collection of a fund was inaugurated to be raised by "Fellowship among the patrons and capitalists of public improvement and those interested in the onward progress of the sciences." It was to be used for the single purpose of printing and disseminating papers, and, after great effort on the part of a committee appointed for the purpose, was subscribed to by fifty persons at \$100 each, and the class of Fellows, comprising all who contributed \$100 to this fund was established. On March 1st, 1882, the fund amounted to \$10,000.

The eight Fellows were elected in the years 1876, 1885, 1886, 1887, 1888, 1891, 1893, and 1899.

In England

THE March 15th issue of *The Journal of the Institute of Municipal and County Engineers*, published in London, England, reprinted the reasons given for joining the Society, as they appeared in the February issue of this Part II, with the following comment:

"Why—Because!"

"The American Society of Civil Engineers have asked the 1,000 men most recently elected this point-blank question: 'Why did you join the Society?' The pith of a few of the answers is given. All are equally applicable to this Institution and some very cogent further reasons might be added by our own members."

Society Growth

AGAIN the temptation to consider the growth of the Society seems almost irresistible.

The August issue of Part I of the Proceedings carried 95 pages of the professional records of persons seeking admission or transfer—399 applications for admission and 78 requests for transfer.

The August list is always large because of the fact that no list is issued in June or July. But the present, *i. e.*, the September list, is even proportionately larger, containing the records of 175 applicants for admission besides those for transfer.

Comparison may be made with 1925, a year quite typical in Society growth of the six years that preceded it. Applications in hand this year to date exceed those at the corresponding date in 1925 by 70 per cent., and they exceed those of 1926 by approximately 20 per cent.

"Convention Jottings"

WHEN President Stevens delivered his address at the Denver Convention he and his audience were at almost exactly the same altitude as he was when he discovered Marias Pass; but it is understood that the temperature was different.

The electric torch that Betts used to signal the operator when he gave his illustrated talk on the Moffat Tunnel served another and mighty valuable purpose the night he was in a disastrous train wreck about a year ago.

Did anybody notice the echo at Echo Lake?

Ralph Ware and his ten crates of puthern California oranges are welcome at any Convention.

Those who essayed golf on the roadmoor links were not able to putt successfully on the greens—not for any number of ordinary reasons but because the prevailing wind being from the west, the grass bends toward the east and the green, therefore, varies with the shot from the smoothness of a mirror to the roughness of a cocoa fibre mat—so 'tis fud.

What does Denver most need? Maybe you knew, but if you didn't

the reporters could tell you and unless you protested—that was it.

Director Chevalier's speech before the weekly luncheon meeting of the Kiwanis Club was considered so excellent a sample that they want him to come back some day and make a real speech.

Pretty nice—those special parlor car accommodations provided for the transfer of the Convention guests from Denver to Colorado Springs!

Among those present were "Colorado Bill," two bridal couples, a Governor, a Mayor, an Apostle of the Mormon Church, an Indian Chief with his attendant brave, two stenographers from Kansas City, the Society tourists bound for Yellowstone, and many photographers.

Were you ever so frequently photographed? With hat on, with hat off, sitting, standing, in the morning, at noon, at night, mile high, two miles high, and nearly three miles up in the air.

Local Sections' Conference

ANNUALLY, at the time of the Convention, is held the Conference of Local Section Representatives, an informal meeting of members from all over the United States to talk about whatever interests them.

The meeting at Denver covered questions of purely Local Section interest; the function of the Local Sections as part of the Society; the work of the Board of Direction; various activities of the Society, and moot questions of the profession—a sufficiently broad field to enlist any one's interest.

The agenda is published in Part I of the Proceedings and an abstract of what was said at the two 3-hour sessions will be mailed early in the fall to each Local Section President, Secretary, and Representative.

It may be remembered that in response to a call for help, Mr. Harry S. Hodge furnished a copy of Vol. 88 of the Transactions which was sent to Mr. Otagawa in Japan. Mr. Otagawa expressed his appreciation to Mr. Hodge and in return has forwarded to him 9 documents, relative to the 1923 earthquake in Japan, hydrographic reports by the Japanese Navy Department, and several other subjects.

September Proceedings

AS the first paper in the September issue of Proceedings, "Precise Weir Measurements," by Ernest W. Schoder, Member, and the late Kenneth, B. Turner, cites extended series of new and very careful tests to determine the reliability of older data, including the affect of velocity of approach.

Four papers were presented at the Philadelphia Convention to the joint meeting of the City Planning Division and the American City Planning Institute. "Basic Information Needed for a Regional Plan," by Harold M. Lewis, Member, considers this topic from the basis of physical, economic, social, legal and financial requirements. The subject of "Housing and the Regional Plan," discussed by John Ihlder of the U. S. Chamber of Commerce, shows how the development of homes and home sites is related to the planning of large centers. Under the title "Cultural Opportunities in Regional Planning," Andrew Wright Crawford, Secretary of the Philadelphia Municipal Art Commission, shows the advantages of utilizing art in city planning. The last of these papers, "Forecast: The Regional Community of the Future," by Thomas Adams of the Regional Plan of New York and Its Environs, discusses the impending developments aiming toward a greater perfection in future cities.

Two historical papers were delivered before the Highway Division at the Philadelphia Convention. "The History and Development of Road Building in the United States," by Thomas H. MacDonald, Chief of the U. S. Bureau of Public Roads, shows how the present national highway system has evolved through various channels. Similarly, "The Question of Roads in France," is treated by P. Le Gavrian, Chief Engineer of French Bridges and Highways.

The papers before the Sanitary Engineering Division at Philadelphia were grouped under two headings. First was a symposium on "Sanitary Engineering in the United States During 150 Years." Various branches of sanitary work were reviewed broadly by experts in the various fields under the following titles: "Water-Works," by George W. Fuller, Member; "Sewerage and Drainage of Towns," by Harrison P. Eddy, Member; "Street Cleaning and the

Collection and Disposal of Refuse," by Samuel A. Greeley, Member; "Historic Notes on Land Drainage in the United States," by S. H. McCrory, Member; "Historic Review of Development of Control of Disease-Bearing Mosquitoes," by J. A. Le Prince, of the U. S. Public Health Service; and "Changing Conceptions of Ventilation Since the Eighteenth Century," by George Truman Palmer, of the American Child Health Association.

The second subject before this Division was a symposium on "Industrial Waste Disposal," also treated by acknowledged authorities under different headings, including: "Introduction," by W. L. Stevenson, Member; "Treatment of Wastes from Oil Refineries," by Robert Spurr Weston, Member; "Disposal of Drainage from Coal Mines," by Andrew B. Crichton, a mining engineer; "Pulp and Paper Mill Wastes," by G. K. Spence, President of the Technical Association of the Pulp and Paper Industry; and "Studies on Tannery Waste Disposal," by Wilhelm Howalt, Member, and Edwin S. Cavett of the Tannery Waste Disposal Commission of Pennsylvania.

"Earth Work by the Hydraulic Method" is discussed by Roy E. Miller, Member, giving the results of experience and studies on this form of construction. "Problems in Concrete Dam Construction on the Pacific Coast," including various phases of work from preliminary estimate to demolition, are described by Arthur S. Bent, Affiliate. Both of these papers were delivered before the Construction Division at the Seattle Meeting.

The discussions in the September Proceedings number thirteen. Six different papers are considered.

Memoirs of nine deceased members are also included, completing the volume.

A "Corner" in Authors

Three papers were printed within the past year which at the time of their acceptance and publication had little in common except similarity of subject. All described tunneling work—one in Colorado, another in New York State, and the third in Greece.

Now the authors of these papers are working together for the Ulen Company in Europe in connection with the new water supply for Athens. R. H. Keays is Chief Engineer; R. W. Gausmann is As-

sistant Manager; and James F. Case is Consulting Engineer in connection with this and other projects for the Ulen Company.

If anything, this "corner" in engineering authorship indicated that the writers of Society papers are in demand as practical engineers.

"The Civil Engineer Who Was Called The Father of Aviation"

(Continued from page 1)

ployment. When told there was no vacancy, he asked for permission to serve without pay as a volunteer chainman. This was granted somewhat reluctantly, with the result that within two months the young man was put on the payroll at \$1.12½ per day, and thought his fortune was made.

From then until 1873 Mr. Chanute engaged in railroad construction, operation, and maintenance, eventually becoming Chief Engineer of one or another of the roads serving the newly developed middle west territory.

"Upon his return to New York in 1873," the memoir states, "he observed that 'Rapid Transit' in that city had been much under discussion for nearly twenty years without any definite results. The necessity for more rapid communication was evident, many projects for superseding the horse-cars had been proposed, but none was recognized as solving the problem, and the public seemed to be completely at sea.

"After some unsatisfactory inquiries as to the reasons for this condition of affairs, Mr. Chanute concluded that the question could be best settled by investigation through a committee of the American Society of Civil Engineers. He was made Chairman of such a committee, which undertook to collect all the data and facts."

Public hearings were held. The resulting report was made public in 1875 and recommended substantially the plan subsequently carried out, that is, the building of four lines of elevated railroads along the avenues.

As early as 1874 Mr. Chanute became interested in aviation, but it was not until 1889, when he was 57 years of age, that he found time to devote himself seriously to the problem. Then "with characteristic industry and thoroughness he engaged in an extensive correspondence with

men all over the world who were interested in this subject, and gathered and systematized all information of importance which he could find, investigating the records of experiments of the past two hundred or three hundred years."

About 1891, Mr. Otto Lilienthal had been making successful gliding experiments near Berlin, and these induced Mr. Chanute to build a Lilienthal glider, and to attempt experiments with man-carrying models in continuation of his previous experiments with small models. His purpose was mainly to attain equilibrium in the air, and he hoped to accomplish this by adjustments which would be largely automatic.

Unlike the unfortunate Lilienthal, who met his death while making one of his gliding tests, Mr. Chanute's many experiments—upward of 200 flights—were free from disastrous misadventure to life or limb.

The glider that he used in his spectacular and epoch-making trials has just been brought to light. For years it has been gathering dust in the loft of the Chicago Natural History Museum, all but forgotten. During the past summer it was resurrected, misshapen wings and struts and all, to take its place among the notable mechanisms in aviation history—the herald of the more famous craft that carved for itself a niche in history at Kitty Hawk.

After Mr. Chanute's death, the Aero Club of Washington said of him: "Lilienthal, Chanute, Langley and Maxim are the names that will ever be inseparably linked with the early stages of flying-machine development; the stages that preceded the successful invention of the first man-carrying machine by the Wright brothers. These four men elevated an inquiry, which for years had been classed with such absurdities as the finding of perpetual motion, and the squaring of the circle, to the dignity of a legitimate engineering pursuit."

Mr. Chanute was elected a Member of the American Society of Civil Engineers in 1868. He served Director for four years, and as Vice President for two years. He was President of the Society in 1891, and for the five succeeding years was *ex officio* a member of the Board of Direction. He died November 23, 1910. In his honor one of the important flying fields and aviation schools for the U. S. Army, that at Rantoul, Ill., has been named Chanute Field.